sent spectral values which are psychoacoustically important compared to other spectral values being defined as priority code words; positioning the priority code words in the raster so that the start of a priority code word which represents a spectral value of the block of spectral values coincides with one raster point and the start of another priority code word which represents another spectral value of the block of spectral values coincides with another raster point.

In accordance with a second object of the present invention, this object is achieved by a device for coding an **audio signal** to obtain a coded bit stream, comprising: a unit for transforming a block of discrete-time samples of the **audio signal** into the frequency domain to obtain a block of spectral values which represent the **audio signal**; a unit for coding the spectral values with a code table having a limited number of code words of different lengths to obtain spectral values coded with code words, the length of a code word which is assigned to a spectral value generally being that much shorter the higher the probability of occurrence of the spectral value is; a unit for determining a raster for the coded bit stream where the raster has equidistant raster points and where the separation of the raster points depends on the code table; a unit for defining priority code words among the code words, those code words which represent spectral values which are psychoacoustically important compared to other spectral values being defined as priority code words; and a unit for positioning the priority code words in the raster so that the start of a priority code word which represents a spectral value of the block of spectral values coincides with one raster point and the start of another priority code word which represents another spectral value of the block of spectral values coincides with another raster point.

In accordance with a third object of the present invention, this object is achieved by a method for decoding a bit stream representing a coded audio signal, where the coded bit stream contains code words of different lengths from a code table and has a raster with equidistant raster points, where the code words include priority code words, which represent particular spectral values of a block of spectral values which are psychoacoustically important compared to other spectral values, where the block of spectral values represents a spectrum of a block of temporal samples of the audio signal, and where priority code words are aligned with raster points so that the start of a priority code word representing a spectral value of the block of spectral values coincides with one raster point and the start of another priority code word representing another spectral value of the block of spectral values coincides with another raster point, comprising the following steps: detecting the distance between two adjacent raster points; resorting the priority code words, which are aligned with the raster points, in the coded bit stream in such a way as to obtain a linear arrangement of the same with frequency, the start of a priority code word coinciding with a raster point; decoding the priority code words with an associated code table to obtain decoded spectral values; and transforming the decoded spectral values back into the time domain to obtain a decoded audio signal.

In accordance with a fourth object of the present invention, this object is achieved by a device for decoding a bit stream representing a coded audio signal, where the coded bit stream contains code words of different lengths from a code table and has a raster with equidistant raster points, where the code words include priority code words, which represent particular spectral values of a block of spectral values which are psychoacoustically important compared to other spectral values, where the block of spectral values represents a spectrum of a

block of temporal samples of the audio signal and where priority code words are aligned with raster points so that the start of a priority code word representing the spectral value of the block of spectral values coincides with one raster point and the start of another priority code word representing another spectral value of the block of spectral values coincides with another raster point, comprising: a unit for detecting the distance between two adjacent raster points; a unit for resorting the priority code words, which are aligned with the raster points, in the coded bit stream in such a way as to obtain a linear arrangement of the same with frequency, the start of a priority code word coinciding with a raster point; a unit for decoding the priority code words with an associated code table to obtain decoded spectral values; and a unit for transforming the decoded spectral values back into the time domain to obtain a decoded audio signal.

The present invention is based on the finding that the raster already proposed must be fashioned or occupied in a way that permits efficient coding/decoding as well as error-tolerant coding/decoding. Of prime importance here is the fact that the code words, which are obtained by an entropy coding in the form of a Huffman coding, are inherently of different lengths since the greatest coding gain results when the most frequent value to be coded has a code word of the shortest possible length assigned to it. On the other hand a value to be coded which occurs relatively infrequently, even though it has a relatively long code word assigned to it, results in an optimal amount of data viewed statistically. Code words obtained by a Huffman coding thus have different lengths per se.

According to a first aspect of the present invention so-called priority code words are placed at the raster points so that the start of the priority code words can be identified without fail by a decoder via the raster even if there is an error in